

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended): A system for providing assistance in regenerating depollution means associated with oxidation catalyst-forming means integrated in an exhaust line of a motor vehicle diesel engine, and in which the engine is associated with common rail means for feeding fuel to the cylinders of the engine and adapted, at constant torque, to implement a strategy of regeneration by injecting fuel into the cylinders in at least one post-injection, the system comprising:

- means for detecting a request for regeneration, and thus for post-injection;
- means for detecting at least one of (i) a state stage in which the vehicle accelerator pedal is being raised ~~or~~ and (ii) a stage in which the vehicle engine is idling;
- acquisition means for acquiring the temperature downstream from the catalyst-forming means;
- means for responding to said temperature to determine a maximum quantity of fuel to be injected during post-injections during stages in which the engine is returning to idling as a result of the accelerator pedal being raised and stages during which the engine is idling; and
- means for performing at least one of (i) immediately interrupting the or each post-injection if the quantity of fuel injected the post-injections if the total quantity of fuel that has been injected through post-injections since the start of the post-injections during the stage of

returning to idling reaches the predetermined maximum quantity during ~~a~~ this stage of returning to idling, ~~and/or for~~ and (ii) progressively reducing ~~the or each post injection when the quantity of fuel injected the post-injections as soon as the total quantity of fuel that has been injected through post-injections since the start of the post-injections during the stage of the engine idling~~ reaches the predetermined maximum quantity during ~~a~~ this stage of the engine idling.

2. (Currently amended): A system according to claim 1, wherein the reduction means are adapted to reduce ~~the or each post injection~~ the post-injections in application of a calibratable slope.

3. (Previously presented): A system according to claim 1, wherein the depollution means comprise a particle filter.

4. (Previously presented): A system according to claim 1, wherein the depollution means comprise a NOx trap.

5. (Previously presented): A system according to claim 1, wherein the fuel includes an additive for being deposited together with the particles with which it is mixed on the depollution means in order to facilitate regeneration thereof.

6. (Previously presented): A system according to claim 1, wherein the fuel includes an

additive that forms a NOx trap.

7. (Previously presented): A system according to claim 1, wherein the engine is associated with a turbocharger.

8. (New): A system according to claim 1, comprising means for detecting (i) a state in which the vehicle accelerator pedal is being raised and (ii) a stage in which the vehicle engine is idling.

9. (New): A system according to claim 1, comprising means for detecting a stage in which the vehicle accelerator pedal is being raised, and means for immediately interrupting the post-injections if the total quantity of fuel that has been injected through post-injections since the start of the post-injections during the stage of returning to idling reaches the predetermined maximum quantity during this stage of returning to idling.

10. (New): A system according to claim 1, comprising means for detecting a stage in which the vehicle engine is idling, and means for progressively reducing the post-injections as soon as the total quantity of fuel that has been injected through post-injections since the start of the post-injections during the stage of the engine idling reaches the predetermined maximum quantity during this stage of the engine idling.

11. (New): A method of providing assistance in regenerating a depollution apparatus associated with an oxidation catalyst integrated in an exhaust line of a motor vehicle diesel engine, and in which the engine is associated with a common rail for feeding fuel to the cylinders of the engine and adapted, at constant torque, to implement a strategy of regeneration by injecting fuel into the cylinders in at least one post-injection, the method comprising:

- detecting a request for regeneration, and thus for post-injection;
- detecting at least one of (i) a stage in which the vehicle accelerator pedal is being raised and (ii) a stage in which the vehicle engine is idling;
- acquiring the temperature downstream from the catalyst;
- responding to said temperature to determine a maximum quantity of fuel to be injected during post-injections during stages in which the engine is returning to idling as a result of the accelerator pedal being raised and stages during which the engine is idling; and
- performing at least one of (i) immediately interrupting the post-injections if the total quantity of fuel that has been injected through post-injections since the start of the post-injections during the stage of returning to idling reaches the predetermined maximum quantity during this stage of returning to idling, and (ii) progressively reducing the post-injections as soon as the total quantity of fuel that has been injected through post-injections since the start of the post-injections during the stage of the engine idling reaches the predetermined maximum quantity during this stage of the engine idling.

12. (New): Method according to claim 11, wherein, in the reduction step, the

post-injections are reduced in application of a calibratable slope.

13. (New): Method according to claim 11, wherein the depollution apparatus comprises a particle filter.

14. (New): Method according to claim 11, wherein the depollution apparatus comprises a NO_x trap.

15. (New): Method according to claim 11, wherein the fuel includes an additive which is deposited, together with the particles with which it is mixed, on the depollution apparatus in order to facilitate regeneration thereof.

16. (New): Method according to claim 11, wherein the fuel includes an additive that forms a NO_x trap.

17. (New): Method according to claim 11, wherein the engine is associated with a turbocharger.

18. (New): Method according to claim 11, comprising detecting (i) a state in which the vehicle accelerator pedal is being raised and (ii) a stage in which the vehicle engine is idling.

19. (New): Method according to claim 11, comprising detecting a stage in which the vehicle accelerator pedal is being raised, and immediately interrupting the post-injections if the total quantity of fuel that has been injected through post-injections since the start of the post-injections during the stage of returning to idling reaches the predetermined maximum quantity during this stage of returning to idling.

20. (New): Method according to claim 11, comprising detecting a stage in which the vehicle engine is idling, and progressively reducing the post-injections as soon as the total quantity of fuel that has been injected through post-injections since the start of the post-injections during the stage of the engine idling reaches the predetermined maximum quantity during this stage of the engine idling.